CLAIMS

1. A method of manufacturing a planar light-wave circuit for manipulating an optical signal, the method comprising:

forming a mask of optical waveguides defining at least one optical waveguide pattern on a core material, the core material being on a bottom cladding; and

forming a mask of load structures defining at least one etch load pattern on the core material until a total surface area of both the optical waveguide mask and the load structure mask cover at least approximately 25% of a surface area of the core material.

2. The method of claim 1, wherein the mask of optical waveguides and the mask of load structures are formed simultaneously.

3. The method of claim 1, further comprising etching the core material not masked by the optical waveguide mask and load structure mask.

4. The method of claim 1, wherein the mask of optical waveguides is separated from the mask of load structures mask by at least 50 μm.

5. The method of claim 1, further comprising depositing cladding after etching.

6. The method of claim 1, wherein the load structure mask forms the etch load pattern having at least two load structures which intersect one another.

7. The method of claim 1, wherein the pattern of load structures has a profile similar to a profile of the pattern of optical waveguides.

8. A planar light-wave circuit having at least one optical waveguide pattern and at least one etch load pattern and being made in accordance with the process of any of claims 1-7.

9. The planar light-wave circuit of claim 8 wherein the etch load pattern is distributed over a surface of the PLC.

10. A wafer having at least one planar light-wave circuit pattern comprising:

a cladding layer having a cladding surface area;

at least one planar light-wave circuit pattern comprising each a plurality of optical waveguides;

a total surface area of said planar light-wave circuit patterns an optical waveguide coverage area;

a plurality of load structures on said cladding layer and forming a pattern of etch loading, wherein each of said load structures is separated from each said optical waveguide by at least a proximity correction distance;

a total surface area of said pattern of etch loading defining an etch load coverage area; and

wherein the sum of said optical waveguide coverage area and said etch load coverage area are at least approximately 25% of said substrate surface area.